

Table 5-9. Estimated incremental releases of radionuclides to surface streams due to operation of L-Reactor support facilities (curies per year)

Radionuclide	Separations areas (F&H)	Fuel fabrication area (M)	Heavy-water rework area (D)	Total
H-3	3.9×10^1	--	5.2×10^2	5.6×10^2
Sr-89, 90 ^a	5.8×10^{-2}	--	3.5×10^{-3}	6.2×10^{-2}
Cs-134, 137	1.9×10^{-2}	--	8.0×10^{-5}	1.9×10^{-2}
U-235	--	5.0×10^{-2}	--	5.0×10^{-2}
Pu-239 ^a	2.9×10^{-3}	--	7.0×10^{-6}	2.9×10^{-3}

^aUnidentified beta-gamma releases are assumed to be Sr-90; unidentified alpha releases are assumed to be Pu-239.

Table 5-10. Incremental radionuclide releases to seepage basins from support facilities^a (curies per year)

Isotope	Separations area (F&H)	Fuel fabrication area (M)	Central shop (CS)	Total
H-3 ^b	5.7×10^3	--	2.0×10^{-1}	5.7×10^3
Cr-51	3.6×10^{-1}	--	--	3.6×10^{-1}
Co-58, 60	5.4×10^{-2}	--	3.0×10^{-6}	5.4×10^{-2}
Zn-65	3.0×10^{-2}	--	--	3.0×10^{-2}
Sr-89, 90	5.9×10^{-1}	--	1.0×10^{-6}	5.9×10^{-1}
Nb-95	8.2×10^{-1}	--	--	8.2×10^{-1}
Zr-95	1.3	--	--	1.3
Ru-103, 106	9.9	--	--	9.9
Sb-124, 125	1.1×10^{-2}	--	--	1.1×10^{-2}
I-131	1.3×10^{-2}	--	--	1.3×10^{-2}
Cs-134, 137	2.4	--	1.0×10^{-6}	2.4
Ce-141, 144	3.0	--	--	3.0
Pm-147	1.2×10^{-1}	--	--	1.2×10^{-1}
Am-241, 243	3.3×10^{-2}	--	--	3.3×10^{-2}
Cm-242, 244	1.0×10^{-3}	--	--	1.0×10^{-3}
U-235, 238	7.3×10^{-2}	3.5×10^{-2}	--	1.1×10^{-1}
Pu-238, 239	2.2×10^{-2}	--	--	2.2×10^{-2}
Other beta, gamma ^c	9.3×10^{-2}	--	5.0×10^{-6}	9.3×10^{-2}
Other alpha ^c	--	--	3.0×10^{-7}	3.0×10^{-7}

^aAdapted from Du Pont (1982a).

^bThirty percent of tritium is assumed to evaporate and be released to the atmosphere at ground level.

^cFor calculational purposes, unidentified beta-gamma releases were assumed to be Sr-90; unidentified alpha releases were assumed to be Pu-239.

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